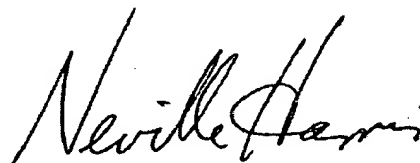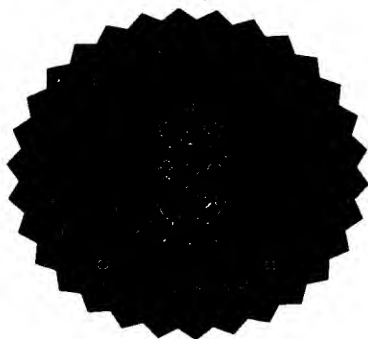OIPE
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PATENT & TRADEMARK OFFICE

CERTIFICATE

This certificate is issued in support of an application for Patent registration in a country outside New Zealand pursuant to the Patents Act 1953 and the Regulations thereunder.

I hereby certify that annexed is a true copy of the Provisional Specification as filed on 5 January 2000 with an application for Letters Patent number 502191 made by WWW.INTERNET SOLUTIONS LIMITED.

Dated 17 January 2001.

Neville Harris
Commissioner of Patents

502191

Patents Form # 4

NEW ZEALAND

Patents Act 1953

PROVISIONAL SPECIFICATION

5   **Title: Messaging System**

We, *WWW .INTERNET SOLUTIONS LIMITED*,
Nationality: *A New Zealand company*
Address: *2902 Quay West Apartments, 8 Albert Street. Auckland City.*
New Zealand,
10   do hereby declare this invention to be described in the following statement :

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MESSAGING SYSTEM

TECHNICAL FIELD OF THIS INVENTION

5   This invention relates to a messaging system, and has particular application to the transmission of messages by email. However it is not limited only to email, but envisages also the combination of email with other means of delivering messages either by hard copy, or via electronic means including the possibility of text messages, voice messages, or multi media messages.

10

BACKGROUND

With the recent plethora of Internet services, particularly email servers, and the fact that many email addresses are country independent, it is difficult to locate the correct email address for your intended recipient, and if you have the misfortune to misplace
15   that persons email address, or if you try to find that email address by searching the Internet, you are likely to not find the correct address, or alternatively find a large number of hits for the persons name an find it difficult to chose the correct email address, or indeed even locate the person.

This situation is compounded by the fact that with a number of different Internet
20   providers (ISPs) people frequently change their ISP and hence their email address, and this makes it difficult to maintain contact with friends or business acquaintances, unless the recipient makes use of a forwarding service. Many people do not do this.

In addition to this, only a small percentage of people in each country have Internet addresses, and thus is necessary to rely on faxes, voice messages by telephone, pager
25   messages, or the physical delivering of mail through a postal or courier service.

There is a need for an improved messaging system, particularly one which allows for reliable collection of emails by the intended recipient.

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OBJECT

It is an object of this invention to provide an improved messaging system, or one that will at least provide the public with a useful choice.

STATEMENT OF INVENTION

5   In one aspect, the invention provides a messaging system which uses a "media independent address" the details of which are stored on a database, the database comprising a plurality of records, each record being distinguished by its media independent address, and containing information on the account holder.

This database preferably includes the account holders wishes as to the preferred
10   means of delivery of the messages, and any filter that the account holder wishes to be placed on incoming messages.

Preferably the media independent address is an alphanumeric code based on the account owners telephone number, preferably country code, area code, full telephone number, and some part of the account owner's family name or given name or both,
15   the details of which are set out in our accompanying New Zealand provisional specification entitled "Identification System" the contents of which are incorporated herein and by way of reference.

In another aspect the invention provides an messaging system capable of directing messages by email to a recipient by allocating to person within a group (e.g. potential
20   subscribers) an email address prefix (for use with an ISP suffix) a   unique alphanumeric identification code, each of which codes incorporates a predetermined combination of:

a unique number and an alphanumeric component.

Preferably the unique number is one which can be looked up in a published list such
25   as a directory of telephone numbers or company or business name registration numbers or occupation registration numbers.

In its most preferred form the invention provides a system for combing telephone numbers (including country code and area code information) with an alphanumeric representing individuals or departments at a particular location represented by the telephone number.

5 In a further aspect the invention provides a messaging system including a message storage or redirection centre which makes use of an identification system for individuals which is relatively easy for an individual to remember or use, which involves allocation to each individual in a group a unique alphanumeric identification code, each of which codes

10 incorporates a predetermined combination of:

an individuals country code;

an individuals locality (e.g. area) code;

an alphanumeric representation of at least part of an individual's name; and

at least part of an individual's listed number (e.g. a listed telephone number).

15 These and other aspects of this invention, which should be considered in all its novel aspects, will become apparent from the final description, which is given by way of example only.

EXAMPLES

Example 1

20 Consider the population of New Zealand, it is about 4 million people. Each of these individuals can be provided with an individual alphanumeric code based on the following predetermined rule:

International telephone country code, telephone area code, local residential telephone number, then a character based string (preferably chosen from alphabetical characters) or a numeric or an alphanumeric string representing that individual.

25 A fictional example may be a household of 2 adults and 4 children, in Wellington New Zealand (country code 64, are code 4) each with the family name SMITH, with given names as follows:

John, Mary, Michael, Joseph, Jean, Jane.

Telephone number say 569-3578

Their individual codes would be:

64-4-569-3578-JOHS for   John Smith

64-4-569-3578-MARS for   Mary Smith

64-4-569-3578-MICS for   Michael Smith

64-4-569-3578-JOSS for   Joseph Smith

64-4-569-3578-JEAS for   Jean Smith

64-4-569-3578-JANS for   Jean Smith

The dashes have been inserted to show the constituent parts of the complete codes, in practice they could be omitted.

By using the identification system of Example 1, it is possible to allocate a meaningful code to known individuals within a group, for example the group could comprise of all adults in New Zealand, or in fact all adults and children in New Zealand. This code can then be used as a media independent address, when used in conjunction with a database server. There are various permutations and combinations that could be used with such an identification system.

Example 2

Instead of using a numeric identifier for the country code, the International Standard 2 letter country code could be used, so that the code for John Smith would be:

NZ-4-569-3578-JOHS for   John Smith

Email System

By allocating codes to individuals, it is possible to provide each individual with a "virtual" email address. For example if the system operator is in this case a ISP, and allocates accounts to the various individuals giving each individual an email address

based on their individual codes. For example in the case of John Smith the email would be 64-4-569-3578-johs@"ISPNAME".com

The applicant proposes to use an ISP name such as "fleximail.com" so that the address for John Smith would be 64-4-569-3578-johs@fleximail.com.

Users could have the choice of accessing that email address directly, or using it as a virtual email address, together with an appropriate forwarding system so that emails can be forwarded to the email account they prefer to use, or for those customers who do not use email any messages received at that email address could be forwarded to the customers in whatever way they chose.

The system lends itself to free email addresses to customers, in a similar fashion to hot mail, or one of the other international free email services.

Example 3

Instead of using a complete telephone number with country and area code as the prefix of the individual code, the order could be varied so that family name and country code came first.

John Smith could thus have a code based on any one of the following permutations:

SMITH-NZ-JOHN-4-569-3578 - this uses the full telephone number.

SMITH-NZ-JOHN-4-3578 - using only last 4 digits of telephone number

Unified Messaging System

By using the identification codes as "media independent address", it is possible to use the database server as a clearing house for all different types. For example knowing the address code for John Smith 64-4-569-3578-JOHS@FLEXIMAIL.com it is then possible to address mail by simply putting that on the label and nothing else, and posting it using one of the mail carriers. The address code includes country and area code information, as well as the name of the ISP. That ISPFLEXMAIL.com can provide a physical address or pick up point for such mail, for example it might have interconnection agreement with various mail and courier services, or it might simply

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have a physical delivery address, or it might recommend to customers to use its own nominated mail service for such deliveries.

There are many different possibilities for delivering mail to the ISP, and many different ways that the ISP can then automate the onward transmission or storage of that mail to the intended recipient.

For example John Smith may prefer that hard copy mail be opened and faxed to a particular fax number which he has designated, or that it be scanned and transmitted as an attachment to an email to his designated address, or he may prefer that he is contacted in another way perhaps by pager message, an email message, or a voice mail message to say that mail is waiting for his collection, or he may prefer that the message is read out to him over the telephone.

The choice of the delivery is up to the recipient, and the recipient may have different rules in his account for holding or onward transmission of mail, at different times, or he may paste different rules on the mail depending on the type of mail to be delivered to him.

The recipient may wish to place a filter on certain mail so that "junk mail" or a specified category of mail is filtered out and not delivered.

That address code for John Smith can be used by others to send John Smith faxes, emails, voice mail, multi media information, in fact any information of any type that needs to be transmitted either physically or electronically to John Smith.

This media independent address deals with a situation of a number of individuals at a particular household. It also allows the ISP to provides means for looking up the subscribers at a particular address. The inventor believes that such a look up function should be limited to individuals or companies who are already subscribed to the messaging system, so that information is not misused.

For example if a subscriber wishes to send an email address to an individual at the Smith household, and he knows the phone number but not the particular email addresses, he could then either email or telephone the ISP, and the ISP could then

provide information on the subscribers at that particular telephone number. The sequence could be as follows:

Enquiring subscriber dials the ISP phone number this would typically be an 0800 number possibly 0800FLEXIMAIL. An automated answering system would then ask the subscriber to enter there own telephone or account number. The system would then ask the subscriber which telephone number they wish to access and then the subscriber could then enter that telephone number as 64-9-569-3578 and then the system could read back to the enquiring subscriber the identity and codes of the people at that address. In its most simplified form the system could say if you wish to send a message to:

John Smith press 1, Mary Smith press 2, Michael Smith press 3 etc...

The enquiry subscriber having chosen to send a message in this case to Mary Smith would press 2 on their telephone keypad, and could then hear the precise email address if that is what they wanted to send, or if they wanted to send a voice message at this point they could dictate the voice message which would be transmitted to the ISP and then the ISP could determine how to deliver that voice message to Mary Smith.

For example Mary Smith's account might say that voice messages are to be transcribed and forwarded on an email addresses, or forwarded as pager messages via her pager service or she might request that she be notified of voice mail messages and simply dials in at her own convenience to listen to the voice mail messages. In extreme case the voice mail message could be converted into text, faxed to the nearest delivery point, and delivered as physical mail, either through the mail carrier or delivered immediately by hand, emulating the old style of telegram service. Again the delivery means can be chosen by the recipient, depending upon convenience, the location of the recipient, and the costs of the different delivery routes.

It is envisaged that initially many customers will prefer to have text messages delivered by a mail courier or by fax rather than by email, or though as the system

takes off more and more people will use some sort of email deliver as the preferred means of collecting their messages.

Example 4

This system can be used for businesses as well as residential addresses. In the case of businesses having a large number of department and a large number of staff, the messaging system may well acquire an expansion to the media independent address perhaps by including the department for example sales, accounts, manufacturing or some abbreviation of these terms, in association with the recipients name, or in some case just simply using the accounts as the final part of the address without there being any particular individual nominator.

The following is an example in the form of a commented list of what the user would actually do to send a message or read a message using the phone system to send/retrieval system.

Registering a New Account

Note that everyone would have an account initially but they are all unregistered until the user actually registers it.

1. User rings local registration presence number.

2. System identifies incoming number by CLI and looks up unregistered accounts against that number.

3. User is prompted as to which account they wish to register, there is also an option for New Account.

4. User is then prompted to confirm the First Name and their last name along with the spelling. If incorrect the user is asked to re-enter the incorrect part via touch-phone

5. After confirmation of name the system creates a standard alpha part of email address from the users name according to the standard rules. The user is then asked whether they wish to

customise the standard alpha signature for the account. They press # to accept or * to modify.

6. After acceptance of the alpha name the system then prompts the user to enter a 4 or more digit pin number and press #.

7. The user is then asked to reconfirm the pin number

8. The system congratulates the user for establishing their account and if there are any messages will ask the user whether they wish to read them.

Sending a Message

1. User calls local presence number for message service

2. User enters his telephone number (user can also enter # if the phone they are calling from is the actual phone number, saves dialling numbers)

3. User then enters their 4 digit pin code. This code identifies the account of the user at that number. (see security issues for what happens on incorrect pin codes)

4. User presses the number 2 button to send a message using phone format or the number 3 button for regular alphanumeric format.

5. (assuming user pressed button 2) The user is now prompted to enter the phone number of the destination. If the user does not enter a country or area code then the country and area code of the local presence number is used(if no such phone combination exists then the user is informed and given the option to re-enter the number)

6. After successfully, entering a phone number the system then looks up the people that have accounts at that number and read their names to the user along with the corresponding number to press if they wish to choose that address. The user presses the number that matches the address they are seeking.

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7. The use is then asked whether they wish to add a further address to the list of recipients in which case they enter a further number and repeat the process or press the # key to exit addressing the email.

5

8. The user is now prompted to leave the verbal message and press the # button to end the message

9. The user is now asked whether they wish to send a further message. They can now hang up the phone if they wish to terminate the session.

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Retrieving faxes/letters/emails/voice messages via phone:

1. User calls local presence number for message service

2. User enters his telephone number (user can also enter # if the phone they are calling from is the actual phone number, saves dialling numbers)

15

3. User then enters their 4 digit pin code. This code identifies the account of the user at that number. (see security issues for what happens on incorrect pin codes)

4. User presses the number 1 button retrieve any messages.

5. System will read each message to the user via Text to Speech technology if it was an email/fax/letter or simply play if it is a voice mail

20

6. At the end of each message the user is asked whether they wish to Delete the message, Onsend to Computer email account for record keeping, Leave message in queue and go to next message.

25

7. User is informed when all messages have been read.

Electronic email addressing:

The system would also accept standard electronic emails. Since our system actually know the first and last name of the user. It could also be more forgiving when it came to incorrectly addressed emails. If no matching

account could be found the system would look at the first name of each account to see whether there was a match, if there is then it would be sent to that person. When this happens an email is also sent back to the sender informing them of what has happened.

Other phone facilities that would need to be provided by the system include:

1. Change pin number

2. Change alpha name

3. Transfer phone number

4. SPAM filtering maintenance

5. Malicious email filtering maintenance

DISCUSSION

By using the address system of the type described in Example 1, or as set out more fully in our corresponding patent application entitled "Identification System" the messaging system can readily direct messages of any type to any nominated subscriber in any country.

It is a particular advantage of this invention that by using a combination of a telephone number or a telephone number in combination with the representation of part or all of the subscribers name (or a combination of numbers and letters chosen by the subscriber – perhaps a "vanity combination" or a combination based on the subscribers Business Name or Trade Mark), it is possible to distinguish between individuals at a particular address (where the address is represented by a telephone number), it makes it easier for the ISP to route the messages to a particular country and then to a particular individual.

As telephone number portability takes on, it is expected that most individuals in the world will be given a telephone number for life. In that case the media independent address can remain the same throughout their lives. The telephone number will in essence will become part of the original family name even though individuals move away from home.

In those cases where telephone number portability has not been introduced to groups of subscribers, or indeed to counties, it is envisaged that the ISP will maintain a number of different addresses with appropriate forwarding systems, for individuals, allowing individuals to use either the originally allocated identification code, or if they wish the new code based on the new telephone number if they move house, or to indeed to provide a forwarding service from one to the other, of to have a multiple of such identification codes pointing to the same individual. However it is expected that most individuals would prefer to use a single identification code and maintain that for life.

It is expected that these individuals may wish to maintain the identification code, and to use it for other purposes perhaps to link to their bank accounts or to indeed to identify their primary bank account, or other account information stored for them by other agencies.

VARIATIONS

In the discussion mention has been made of Internet service providers (ISPs) as the central point for determining how mail is to be delivered to a particular subscriber. The term ISP is simply a convenient acronym for an Internet based system on the assumption that some or all of the user will wish to send information by way of email.

However such a system could be used be used independently of the Internet, so it could combine for example delivering of physical mail, through a mail carrier or courier service or a fax service, or a telephone service, or a voice messaging service, without the need to involve the use of the Internet. However the Internet provides a very useful infrastructure for the delivery of messages, and is believed in most system it will be desirable to combine the power of the Internet to deliver messages by email or "voice over the Internet", or other means of electronically transmitting information to recipients in which case the service provider administering the system and in particular checking on the rules for delivery of messages to recipients will be a Internet service provider as well as being associated with some other system of storing or delivering messages.
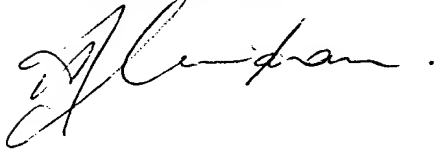
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Finally, various other alterations and modifications may be made to the foregoing without departing from the spirit and scope of this invention.

PIPERS

5   Attorneys for:

Internet Solutions Limited

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